Minutes

August 16, 2016

Subject/Client:	South Dayton Dump & Landfill - Vapor Intrustion Mitigation Respondents to the Removal ASAOC	Ref. No.	038443-201
From:	Julian Hayward	Tel:	519-884-0510 x2250
Venue/Date/Time:	August 4, 2016, 2:30 PM ET		
Copies To:	All Attendees and Absentees		
Attendees:	Steve Renninger, USEPA Leslie Patterson, USEPA Maddie Adams, Ohio EPA Ken Brown, ITW Jim Campbell, EMI Julian Hayward, GHD Valerie Chan, GHD Brent Ramdial, GHD	Absent:	Tom Hut, PHDMC Wendell Barner, TRW Bryan Heath, NCR Brandon Helm, Tetra-Tech

Item	Description	Action
1.	**Roll Call**	GHD
2.	**Methane Monitoring Results:** • GHD completed semi-annual methane monitoring at GP-2 and Site area soil gas probes (GP-7, GP-12, GP22-13, GP23-13, GP24A-13, and GP24B-13) on July 21, 2016. Methane was detected at GP-2 (12') (16') at levels greater than 100% of the Lower Explosive Limit (LEL) (5% methane by volume in air). Methane was not detected at the Site area soil gas probes during the July 2016 methane monitoring events. • In accordance with Addendum 2 of the VI Work Plan (GHD, 2015), GHD increased the monitoring frequency from Tier 3 (semi-annually) to Tier 2 (weekly) status and completed a second round of methane monitoring at GP-2 and Site area soil gas probes on July 29, 2016. The monitoring includes filtered and unfiltered samples (analyzed using a Landtec GEM2000) to distinguish between methane and other organic compounds. Unfiltered methane levels remained greater than the LEL. • Methane was not detected at the Site area soil gas probes during the July 2016 methane monitoring events and has not been detected at these probes since September 12, 2013. Based on the non-detect methane readings at the Site area soil gas probes over the past three years, the elevated levels detected at GP-2 are not related to landfill activities from the	GHD

Item	Description	Action
	South Dayton Dump Site and are not the result off-Site migration. • GHD proposed to modify Addendum 2 to reduce the frequency of methane monitoring because the field monitoring results indicate that the elevated methane readings at GP-2 are unrelated to landfill activities from the South Dayton Site. • USEPA requested GHD collect a SUMMA canister sample for analysis of TO-15 from GP-2 in order to determine the percentage of VOCs and methane in the soil gas and to evaluate GHD's proposal to revise the monitoring frequency at GP-2. • USEPA recommended GHD notify Dayton Power & Light (DP&L) and City of Moraine of the seasonal elevated levels of methane and the potential explosion hazard within the Dryden Road right of way. • GHD will continue to monitor methane at GP-2 and Site area soil gas probes weekly in accordance with Addendum 2 of the VI Work Plan, while additional analytical data is obtained.	
3.	**SSDS Modification Status Update:** • <u>Building 24 (Globe Equipment)</u> - Sub-slab (SS) and indoor air (IA) in compliance. - USEPA and Respondents agreed that no further modifications or adjustments to the sub-slab depressurization system (SSDS) are required. - Next Step: Annual monitoring in Winter 2017. • <u>Building 15 (SIM Trainer)</u> - The current SSDS configuration produces good vacuum at all compliance points. - There are no SS exceedances at SIM Trainer. - Indoor air concentration at IA-15-C is greater than Ohio Department of Health (ODH) screening levels for tetrachloroethene (PCE); however PCE was not detected in the corresponding SS-15-C sample and therefore is not related to vapor intrusion. - No further modifications or adjustments to the SSDS are required. - Next Step: Annual monitoring in Winter 2017. • <u>Building 14 (NexGen Vending)</u> - There are no indoor air exceedances at NexGen Vending. - Trichloroethene (TCE) and 1,1-dichloroethane (1,1-DCA) concentrations in SS soil vapor samples collected at SS-14-A are	GHD/USEPA

Item Description	Action
greater than ODH screening levels and have increased compared to previous results, including 2012 pre-mitigation results. - The increase in vacuum during the June 2016 sampling event may be related to the increase in SS concentrations. - Next Steps: USEPA and Respondents agree to complete adjustments to the SSDS valves in order to obtain optimal vacuum response. GHD will collect real time readings with a PID during the valve adjustments. - Confirmatory sampling after SSDS valve and vacuum adjustments. • <u>Building 12 (S&J Precision)</u> - Good vacuum responses to the SSDS modifications. - There are no IA exceedances at S&J Precision. - TCE concentrations in SS soil vapor at SS-12-SJ-B have decreased compared to previous results; however concentrations remain greater than the ODH screening levels. - USEPA requests that GHD develop a hybrid annual sampling program that is protective of indoor air at S&J Precision, prior to committing to annual monitoring. - Next Step: Provide USEPA with a hybrid sampling program for annual monitoring at Building 12 (S&J Precision). • <u>Building 12 (Overstreet Painting)</u> - TCE concentrations in SS soil vapor samples collected at SS-12-OP-A and SS-12-OP-B are greater than the ODH screening level and have increased compared to 2015 results; possibly due to a decrease in vacuum at the extraction points. - Concentrations of three analytes (benzene, m&p xylenes, and naphthalene) exceeded IA ODH screening levels, but are not detected in corresponding SS samples and are not attributable to vapor intrusion. GHD personnel noted that vehicles are being stored in the building and at least one was leaking fluids. - Next Steps: USEPA and Respondents agree to complete adjustments to the to the SSDS valves in order to obtain optimal vacuum response. GHD will collect real time readings with a PID during the valve and vacuum adjustments. - Confirmatory sampling after SSDS valve and vacuum adjustments. • <u>Building 9 (B&G Equipment and Truck Repair)</u> - TCE concentration in SS soil vapor has decreased significantly but	

Item Description	Action
remains greater than ODH screening level. - Benzene and xylene concentrations in IA were greater than the ODH screening levels; however benzene and xylene are not detected (or detected at low levels) in the SS and the IA exceedances are not attributed to vapor intrusion. - USEPA and Respondents agreed that no further modifications to the SSDS are required. - Respondents propose to move to annual sampling. All parties acknowledge that SS concentrations remain greater than ODH screening levels; therefore, the building is not in compliance. As a result, USEPA requests that GHD develop a hybrid annual sampling program that is protective of indoor air at Building 9, prior to committing to annual monitoring. - Next Step: Provide USEPA with a hybrid sampling program for annual monitoring at Building 9. • <u>Building 8 (B&G Equipment and Truck Repair)</u> - TCE concentrations in SS are greater than the ODH screening level. - Benzene concentrations in IA are greater than ODH screening levels. - IA concentrations are not attributable to sub-slab conditions/vapor intrusion. - No further modifications to the SSDS are required as vacuum response at the worst-case sub-slab probe are good and vapor intrusion in not occurring. - USEPA requests that GHD develop a hybrid annual sampling program that is protective of indoor air at Building 8, prior to committing to annual monitoring. - Next Step: Provide USEPA with a hybrid sampling program for annual monitoring at Building 8.	
4. Next Steps • Draft Hybrid Annual Sampling Programs for Buildings 8, 9, and 12 (S&J Precision). • Complete SSDS valve adjustment and real time monitoring of vacuum response at Building 12 (Overstreet Painting) and Building 14. • Notify interested parties (City of Moraine, DP&L) of the seasonal elevated levels of methane and the potential explosion hazard within the Dryden Road	USEPA/GHD

Item Description	Action
right of way. • Collect a 1-hour sample in a 6 L SUMMA canister at GP-2 (two depths) for analysis of the TO-15 VOC list and methane if and only if the field measurements show the presence of methane.	
5. Next Conference Call Next conference call: Thursday September 22, 2016 at 2:30 PM ET / 1:30 PM CT	

☐ Attachments: _____

This confirms and records GHD's interpretation of the discussions which occurred and our understanding reached during this meeting. Unless notified in writing within 7 days of the date issued, we will assume that this recorded interpretation or description is complete and accurate.

Minutes

September 27, 2016

Subject/Client:	South Dayton Dump & Landfill Site (Site) - Vapor Intrustion Mitigation Respondents to the Removal ASAOC	Ref. No.	038443-201
From:	Julian Hayward	Tel:	519-884-0510 x2250
Venue/Date/Time:	September 22, 2016, 2:30 PM ET		
Copies To:	All Attendees and Absentees		
Attendees:	Steve Renninger, USEPA Leslie Patterson, USEPA Wendell Barner, TRW Ken Brown, ITW Jim Campbell, EMI Julian Hayward, GHD Valerie Chan, GHD	Absent:	Tom Hut, PHDMC Maddie Adams, Ohio EPA Bryan Heath, NCR Brandon Helm, Tetra-Tech

Item Description		Action
1.	**Roll Call**	GHD
2.	**GP- 2 Buried Utility Information:** • GHD submitted a memorandum containing buried utility information for Dryden Road on September 21, 2016. Information and figures were obtained through Ohio Utilities Protection Services (OUPS), but did not contain any details for storm sewers. GHD observed storm sewer inlets (i.e., curb openings/inlets) during field activities and plotted approximate locations on Figure 2 of the memo dated September 21, 2016. • Utilities including sanitary sewer, water main, and gas lines are located on the west side of Dryden Road. Communication lines are present on the east side of Dryden Road. There is no evidence of preferential pathways linking soil gas probe GP-2, located on the east side of Dryden Road adjacent to DP&L, to the west side of Dryden Road and the South Dayton Dump and Landfill Site (Site). • GP-2 unfiltered methane levels remain greater than the lower explosive limit (LEL) and GHD will continue weekly methane monitoring. • GP-23 has not been sampled for TO-15 or methane laboratory analyses, it has not contained detectable levels of methane since August 29 and has not shown an elevated PID response.	GHD / USEPA

Item Description	Action
• GHD explained that soil stratigraphy logs indicate permeable material that is not consistent with formation of preferential pathways with buried utilities. Stratigraphy logs for EPA soil gas probes are not available, but may be located in the USEPA Chicago record center. • USEPA: to summarize, pure methane levels (filtered readings) are less than the LEL of 5%, and the unfiltered readings are greater than the LEL because of contribution of petroleum hydrocarbons. GHD: yes, this summary is supported by the laboratory analysis of GP-2 soil gas. • GHD presented information related to existence of off-site source condition associated with GP-2 soil gas readings (i.e., not from the South Dayton Dump and Landfill Site). • USEPA – how confident are we that there are no other features or utilities present? GHD – visual confirmation of the presence of utilities noted by OUPS members has not been conducted. Respondents and GHD will consider an inspection to confirm information from OUPS and to record other relevant information.	
3. Next Steps • Monitor storm sewer inlets and the manhole near GP-2 for methane. • Methane monitoring of soil gas probes, storm sewer inlets and manhole is scheduled for Wednesday, September 28, 2016.	GHD
5. Next Conference Call Next conference call: Thursday September 29, 2016 at 2:30 PM ET / 1:30 PM CT	

☐ Attachments: _____

This confirms and records GHD's interpretation of the discussions which occurred and our understanding reached during this meeting. Unless notified in writing within 7 days of the date issued, we will assume that this recorded interpretation or description is complete and accurate.

Minutes

October 3, 2016

Subject/Client:	South Dayton Dump & Landfill Site (Site) - Vapor Intrustion Mitigation Respondents to the Removal ASAOC	Ref. No.	038443-201
From:	Julian Hayward	Tel:	519-884-0510 x2250
Venue/Date/Time:	September 29, 2016, 2:30 PM ET		
Copies To:	All Attendees and Absentees		
Attendees:	Steve Renninger, USEPA Leslie Patterson, USEPA Maddie Adams, Ohio EPA Jim Campbell, EMI Wendell Barner, TRW Bryan Heath, NCR Ken Brown, ITW Julian Hayward, GHD Valerie Chan, GHD Brent Ramdial, GHD	Absent:	

Item	Description	Action
1.	**Roll Call**	GHD
2.	**GP- 2 Buried Utility Information:** • Utilities including sanitary sewer, water main, and gas lines are located on the west side of Dryden Road. Communication lines are present on the east side of Dryden Road. There are three pairs of storm water inlets located along Dryden Road in the area of GP-2. GHD completed a visual inspection and methane monitoring at each storm water inlet (SI-1, SI-2, SI-3, SI-4, SI-5, and SI-6), four manholes (MH-7, MH-8, MH-9, and MH-10) and one sanitary manhole on September 28, 2016. • GHD's visual inspection determined that storm water flows from east to west across Dryden Road (SI-6 to SI-1 to MH-8, SI-5 to SI-2 to MH-9, and SI-4 to SI-3 to MH-10 and then north through MH-10, MH-9 and MH-8. Methane was not detected at storm water inlets and manholes monitored on September 28, 2016. • Methane remains present at GP-2, and unfiltered methane levels remain greater than the lower explosive limit (LEL). Methane was not detected at any of the Site Area Probes (GP-7, GP-12, GP22-13, GP23-13, GP24A-13, and GP24B-13) and has not been detected since the single occurrence at	GHD / USEPA / Ohio EPA

Item Description	Action
GP23-13 on August 29, 2016. • USEPA – to summarize, methane levels at GP-2 were 30-40% in July but have decreased over the last month. Methane levels at Site Area Probes have been 0 except for the single occurrence at GP23-13 on August 29, 2016. Methane levels at storm inlets and manholes in the vicinity of GP-2 were 0. An LEL of 1% was recorded at the sanitary manhole. • USEPA agreed that the presence of methane at GP-2 is most likely from a Dayton Power & Light (DP&L) source and asked about next steps. • GHD proposed to submit a memo compiling information collected to date with conclusions. GHD also requested a reduction in monitoring frequency. • USEPA stated that the agencies would discuss the situation with Ohio Bureau of Underground Storage Tank Regulations (BUSTR) in order to address the GP-2 methane situation with DP&L over the next few months. • USEPA requested that GHD and Respondents continue weekly monitoring at GP-2, Site Area Probes and storm inlets and manholes in the vicinity until methane levels decrease to below the LEL, in accordance with the monitoring frequency specified in the Work Plan. GHD and Respondents agreed to continue in the short term based on expectation that concentrations will decrease along with lower ambient temperatures. • Ohio EPA is currently reviewing Ohio BUSTR reports for the DP&L property. Ohio EPA will contact Ohio BUSTR to determine if any explosive gas monitoring was completed as part of the UST removal at DP&L. USEPA suggested inviting Ohio BUSTR to a future conference call. • USEPA - to summarize, continue to complete methane monitoring in accordance with the Work Plan. Respondents will provide an email summary of the results. If any of the readings at Site Area Probes or GP-2 area storm inlets and manholes are greater than the LEL, Respondents will schedule a call with USEPA to discuss the results.	
3. Next Steps • Continue methane monitoring at GP-2, Site Area Probes, storm sewer inlets and manholes near GP-2 for methane.	GHD
5. Next Conference Call Next conference call: Thursday October 27, 2016 at 2:30 PM ET / 1:30 PM CT	

☐ Attachments: _____

This confirms and records GHD's interpretation of the discussions which occurred and our understanding reached during this meeting. Unless notified in writing within 7 days of the date issued, we will assume that this recorded interpretation or description is complete and accurate.

Minutes

October 28, 2016

Subject/Client:	South Dayton Dump & Landfill Site (Site) Vapor Intrustion Mitigation Respondents to the Removal ASAOC	Ref. No.	038443-201
From:	Julian Hayward	Tel:	519-884-0510 x2250
Venue/Date/Time:	October 26, 2016, 1:30 PM ET		
Copies To:	All Attendees and Absentees		
Attendees:	Steve Renninger, USEPA Leslie Patterson, USEPA Maddie Adams, Ohio EPA Jim Campbell, EMI Wendell Barner, TRW Julian Hayward, GHD Valerie Chan, GHD Brent Ramdial, GHD	Absent:	Bryan Heath, NCR Ken Brown, ITW

Item	Description	Action
1.	**Roll Call**	GHD
2.	**GP- 2 Methane Monitoring:** • GHD summarized monitoring results from October 21, and previous results as shown in the Technical Report submitted to the agencies on October 24, 2016. Methane remains present at GP-2, and unfiltered methane levels remain greater than the lower explosive limit (LEL). Unfiltered methane readings at GP-2: 12-foot 16-foot intervals were between 4-6% and 10-13% respectively, during the month of October. Methane was not detected at any of the Site Area soil gas probes (GP-7, GP-12, GP22-13, GP23-13, GP24A-13, and GP24B-13). • GHD confirmed methane readings and trends at all locations are consistent over the past 12 weeks, with no elevated methane in utility corridors. USEPA stated that methane levels at GP-2 are anticipated to drop to below the LEL soon as in past years. • USEPA agreed that the presence of methane at GP-2 is from a Dayton Power & Light (DP&L) source but requests Respondents to continue methane monitoring at GP-2 until methane levels are less than 5% (i.e., LEL). • USEPA asked if Ohio EPA had received any additional information from Ohio Bureau of Underground Storage Tank Regulations (BUSTR) regarding possible explosive gas monitoring completed as part of the UST removal at DP&L. Ohio EPA responded that BUSTR has been contacted and noted that BUSTR does not think there is enough	GHD / USEPA / Ohio EPA

Item Description	Action
evidence to say the methane issue at GP-2 is the result of a DP&L source. • USEPA stated that weekly methane monitoring at GP-2 should continue until levels are below the LEL, but continued monitoring at other gas probes and buried utilities is not necessary. USEPA requested an email update of weekly monitoring results at GP-2 until methane levels are less than 5%, at which point monthly monitoring would commence in accordance with the VI Mitigation Work Plan. GHD will contact USEPA after consulting with Respondents. • USEPA has briefly read Technical Report – GP-2 Methane Monitoring Summary and Assessment (GHD, 2016) and proposed further discussion of its contents and the methane issue at GP-2 over the winter months.	
3. Next Steps • Notify USEPA of plans for future monitoring after consultation with Respondents.	GHD
4. Next Conference Call Next conference call: Date and time to be determined	

☐ Attachments: _____

This confirms and records GHD's interpretation of the discussions which occurred and our understanding reached during this meeting. Unless notified in writing within 7 days of the date issued, we will assume that this recorded interpretation or description is complete and accurate.